# nano-Therm 1302AMD

BDT-1302AMD

Antimicrobial Disinfectant Thermal-Dissipating n-Ceramic Coating

Technical Data Sheet

**nano-Therm 1302AMD** is a clear when cured, easy to apply Antimicrobial Disinfectant formulation that helps to significantly lower the bio-burden and continuously protect treated surfaces from the colonization of bacteria, mold, mildew and fungus while the disinfectant additive in the formulation kills bacteria and viruses such as**; Corona Virus-Human, HIV, HCV & HBV** and more than 140 others from cleaned, product coated surfaces for as long as the coating remains intact.

**nano-Therm 1302AMD** is an extremely hydrophobic coating with super slick properties that greatly reduce the ability of dirt and debris to bond to applied surfaces due to the radical reduction in the coefficient of friction.

**nano-Therm 1302AMD** creates a covalent bond to the substrate, creating an extremely durable bond with the surface it is applied to.

**nano-Therm 1302AMD** is an inert and benign material when cured & gives off no odor or fumes when heated. No VOC's

**nano-Therm 1302AMD** expels thermal heat from the substrate and is an extreme Hydrophobic sealer.

**nano-Therm 1302AMD** may be applied to the entire board & its components and is electrically insulative **BUT** *main board power contact connection points should be kept free of coating.*



**nano-Therm 1302AMD Properties:**

- Color_____Clear
- Viscosity_____12 sec. #2 Zahn
- Percent of Solids_____**26%**
- Odor (liquid)_____Slight Mint Solvent
- Odor (cured)_____None

**BioDefense Technologies, Inc.**
**7355 GA Hwy 85**
**Waverly Hall, GA 31831**
**1-888-906-3801**

- V.O.C._____Exempt per CFR 51.1 / regulation 8
- RoHS_____Compliant
- REACH_____Compliant
- Halogens _____None
- Thermal Stability (cured)_____1200°F + (648.8°C)
- Conical Bond (⅛ inch mandrel)_____Passed (ASTM D522-93a)
- Cross cut adhesion_____5B (ASTM D3359)
- Coefficient of Friction _____0.03µ (ASTM D2047)
- Specific Gravity_____0.889 (ASTM D891-09)
- Pencil Hardness _____8h-9H (ASTM D3363)
- Average applied dry film thickness_____2 to 4 microns
- Estimated Coverage Rate(@ 3 microns)_____3,600 sq./ft. per gallon
- Dry to Touch (time @ambient)_____15 – 25 minutes* (average)
- 50-60% properties (ambient)_____ 6-8 hrs. (24hrs best)

  * Full Physical properties after 5 days @ ambient

  * Warm air flow (not above 110°F) over the applied coating will lessen the "Dry to the Touch" and 50-60 % properties time factor.

**EPA Reg. No. 83019-1**
**FIFRA Reg. no. 61178-5, Refer to EPA list N**
**EPA Est. No. 96461-GA-1**

**nano-Clear 24AMD's antimicrobial disinfectant formulation** helps to continuously kill and protect coated surfaces from the colonization of the following list of microorganisms, significantly lowering the bio-burden upon that surface for an extended period of time.

## MICROORGANISM EFFECTIVE KILL LIST

### Human Viruses

Adenovirus type 2 – Cytomegalovirus – HBV (Hepatitis B Virus) – HCV (Hepatitis C Virus) – Herpes Simplex type 1 Virus – Herpes Simplex type 2 Virus – HIV-1 (AIDS Virus)
*Human Coronavirus
Influenza A/Brazil Virus – InfluenzaA/Victoria(H3N2) Virus - Influenza A2-Asian Virus – Influenza B Virus (Allen strain) – Influenza C Virus (Taylor strain) – Measles Virus

**Non-Human Viruses**

Avian Influenza/Turkey/ Wisconsin Virus
Canine Coronavirus – Canine Distemper Virus – Canine Herpesvirus
Equine Herpesvirus – Equine Influenza
Feline Calicivirus Norovirus – Feline Infectious Peritonitis –
Infectious Bovin Rhinotracheitis (IBR) – Newcastle Disease Virus

**Isolates From AIDS Patients**

Aspergillus niger – Candida albicans
Cryptococcus neoforman

**Gram Positive Clinical Isolates**

Staphylococcus aureus (Toxic shock) – Staphylococcus epidermidis – Staphylococcus saprophyticus

**Gram Negative Clinical Isolates**

Acinetobacter calcoaceticus var. anitratus – Acinetobacter calcoaceticus var. lwoffii Bordetella bronchiseptica – Brevundimonas diminuta

Burkholderia cepacia – Enterobacter agglomerans – Enterobacter cloacae – Enterobacter gergoviae – Enterobacter liquefaciens – Escherichia coli (Urinary) – Escherichia coli (Wound) – Flavobacterium meningosepticum – Hafnia alvei

**Other Bacteria**

Actinobacillus pleuropneumoniae – Actinomyces pyogenes – Bacillus cereus – Bacteroides fragilis – Corynebacterium ammoniagenes, (Brevibacteriumammoniagenes) - Bordetella bronchiseptica – Burkholderia pickettii

Parainfluenza type 1 – Poliovirus type 1 (Chat strain) – Respiratory Syncytial Virus - Rotavirus Vaccinia Virus

Porcine Parvovirus – Porcine Respiratory & Reproductive Syndrome Virus – Porcine Rotavirus – Pseudorabies Virus – Transmissible Gastroenteritis (TGE) T1 bacteriophage – T4 bacteriophage – Vesicular Stomatitis Virus (VSV) Bovine – Viral Diarrhea Virus (BYDV) – Avian Influenza Virus (H5N1)

Pseudomonas aeruginosa – Staphylococcus aureus – Streptococcus pneumoniae - Streptococcus haemoiyticus – Streptococcus pyogenes

Klebsiella oxytoca – Klebsiella pneumoniae – Morganella morganii – Proteus mirabilis -Proteus vulgaris – Pseudomonas aeruginosa – Pseudomonas fluorescens – Pseudomonas pseudomallei – Pseudomonas putida – Pseudomonas stutzeri – Serratia marcescens – Sphingomonas paucimobilis

Campylobacter jejuni – Chryseomonas luteol – Corynebacterium pseudotuberculosis – Enterobacter aerogenes – Enterococcus faecalis – Enterococcus faecium – Enterococcus hirae – Escherichia coli